

#### Assignment -4

Assignment Date	19 October 2022
Student Name	ANNIE PRASANNA M
Team ID	PNT2022TMID05906
Project Name	Project-Smart Farmer-IoT Enabled Smart Farming Application
Maximum Marks	2 Marks

#### Question-1:

**Write code and connections in wokwi for ultrasonic. Whenever distance is less than 100 cms send “alert” to ibm cloud and display in device recent events.**

#### Solution:

```
#define ECHO_PIN 2

#define TRIG_PIN 3

#define organization = “fkxdqs”

#define deviceType = “Arduino”

#define deviceId = “1200”

#define authMethod = “use-token-auth”

#define authToken = “00000000”

void setup() {

  Serial.begin(9600);

  pinMode(TRIG_PIN, OUTPUT);

  pinMode(ECHO_PIN, INPUT);

}

float readDistanceCM() {

  digitalWrite(TRIG_PIN, LOW);

  delayMicroseconds(2);

  digitalWrite(TRIG_PIN, HIGH);

  delayMicroseconds(10);

  digitalWrite(TRIG_PIN, LOW);

  int duration = pulseIn(ECHO_PIN, HIGH);

  return duration * 0.034 / 2;
```

```
}
```

```
void loop() {
```

```
    float distance = readDistanceCM();
```

```
    if(distance <= 100)
```

```
    {
```

```
        Serial.println("person detected ");
```

```
    }
```

```
    else{
```

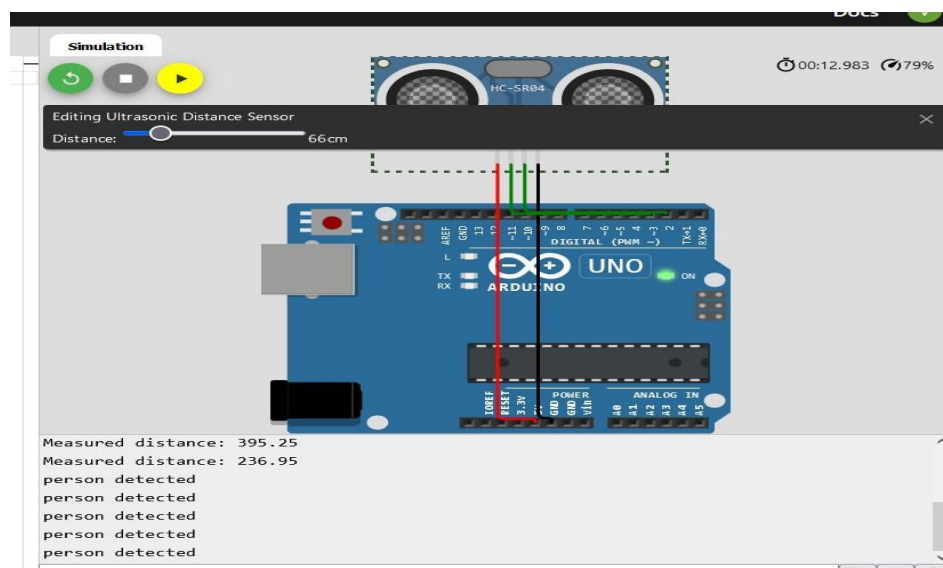
```
        Serial.print("Measured distance: ");
```

```
        Serial.println(readDistanceCM());
```

```
    }
```

```
    delay(1000);
```

```
}
```



**Wokwi Link:** <https://wokwi.com/projects/346567349532361298>

### Device Recent Events

IBM Watson IoT Platform

820419205065@smartinternz.com  
ID: fiodqs

Browse Action Device Types Interfaces

Add Device

Criteria: To get started, you can add devices by using the Add Device button, or by using API.

Search by Device ID

Device Simulator

Device ID	Status	Device Type	Class ID	Date Added	Descriptive Location	Added By
1200	Disconnected	Arduino	Device	Oct 26, 2022 1:10 PM		820419205065@smartinternz.com

Identity Device Information Recent Events State Logs

Device ID: 1200  
Device Type: Arduino  
Date Added: Oct 26, 2022 1:10 PM  
Added By: 820419205065@smartinternz.com  
Connection Status: Disconnected

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IBM Watson IoT Platform

BrowseActionDevice TypesInterfaces

Search by Device ID

Add Device

Device Simulator

Device IDStatusDevice TypeClass IDDate AddedDescriptive LocationAdded By

1200DisconnectedArduinoDeviceOct 26, 2022 1:10 PM820419205065@smartinternz.com

IdentityDevice InformationRecent EventsStateLogs

The recent events listed show the live stream of data that is coming and going from this device.

Event	Value	Format	Last Received
event_1	"PersonDetected"	json	a few seconds ago
event_1	"PersonDetected"	json	a few seconds ago
event_1	"PersonDetected"	json	a few seconds ago
event_1	"PersonDetected"	json	a few seconds ago
event_1	"PersonDetected"	json	a few seconds ago

1 Simulation running